



KS2 Science Forces

Gravity: What goes up must come....

DOWN

Year 5 April 2020



Introduction

- [Gravity – what is it?](#)
- [Who discovered it?](#)
- [How do we measure it?](#)
- [Links for further study](#)
- [Quiz](#)



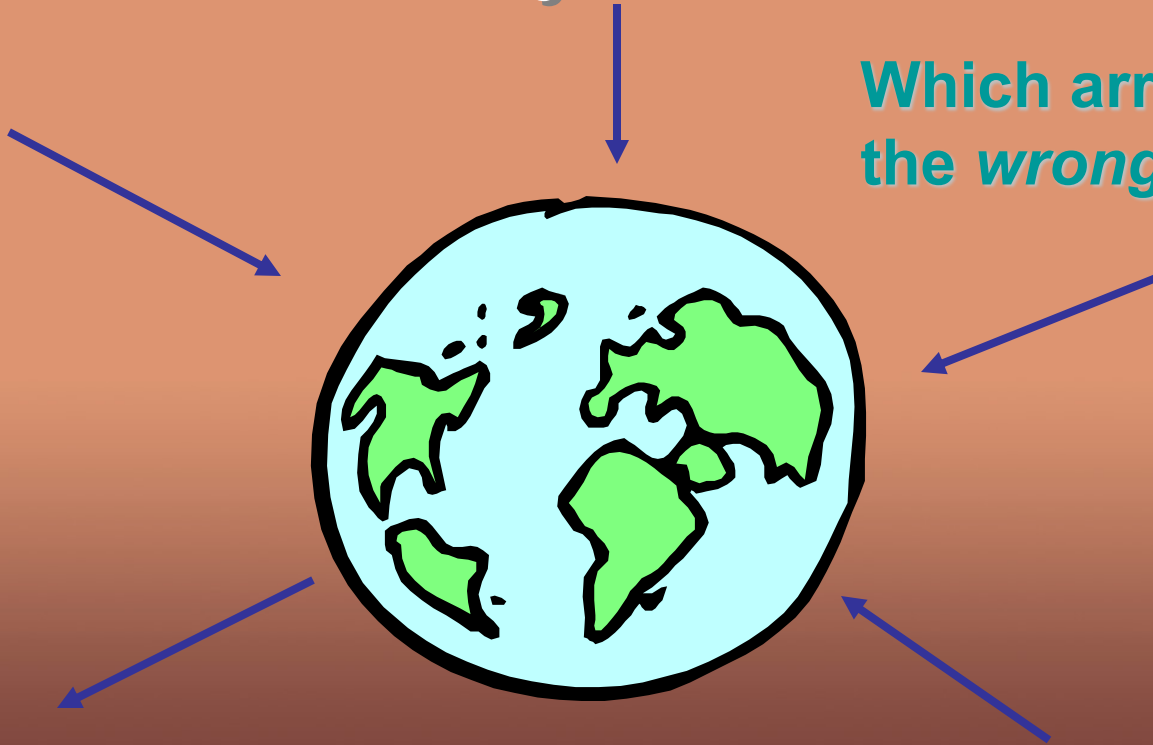
Gravity – what is it?

- is an **attractive force** between objects with mass.
- Gravity acts on the Earth by **pulling** objects **towards its centre**.
- Gravitational force is different on other planets because the gravitational force is **dependent on the mass of the object**.
So, an object with heavier mass has a stronger gravitational pull = has a heavier weight.



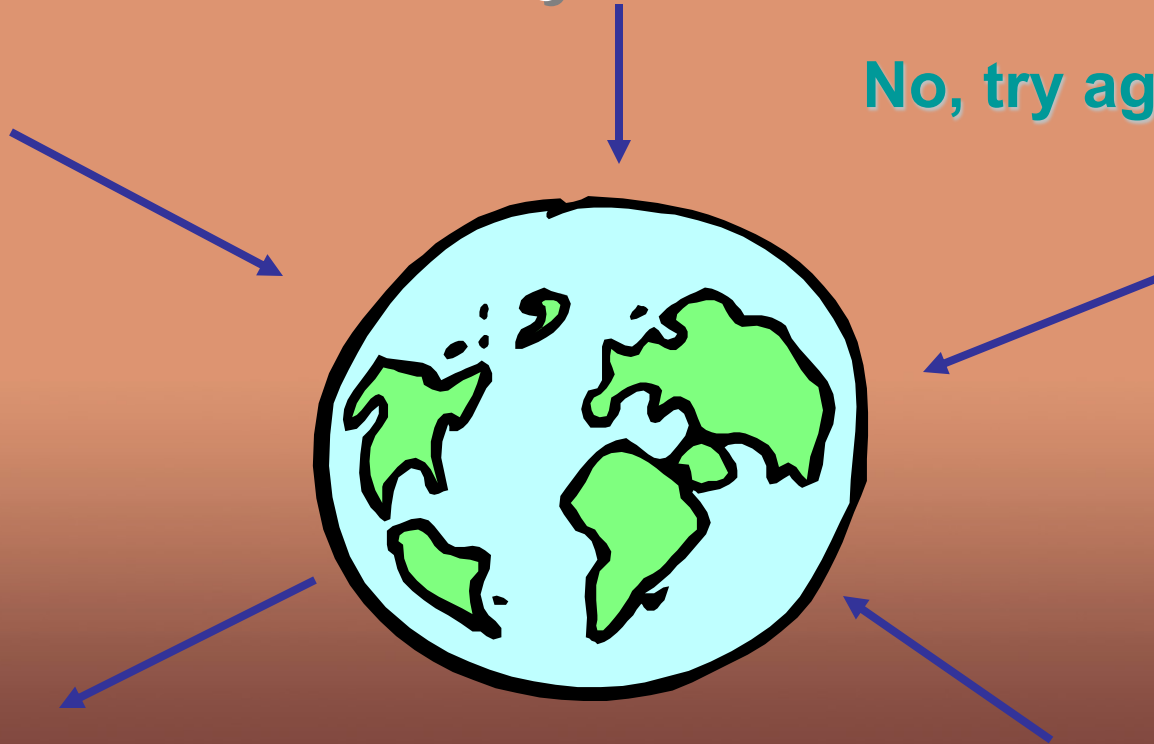
Gravity – what is it?

Which arrow is pointing the *wrong* way?

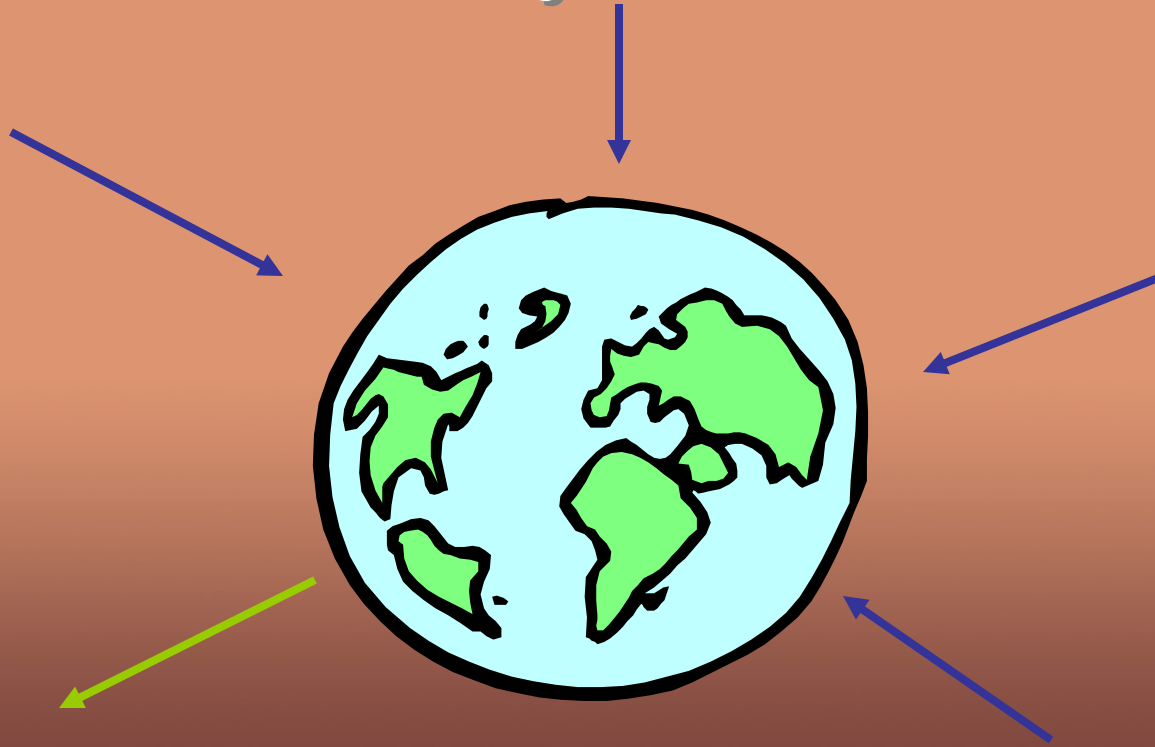


Gravity – what is it?

No, try again.



Gravity – what is it?



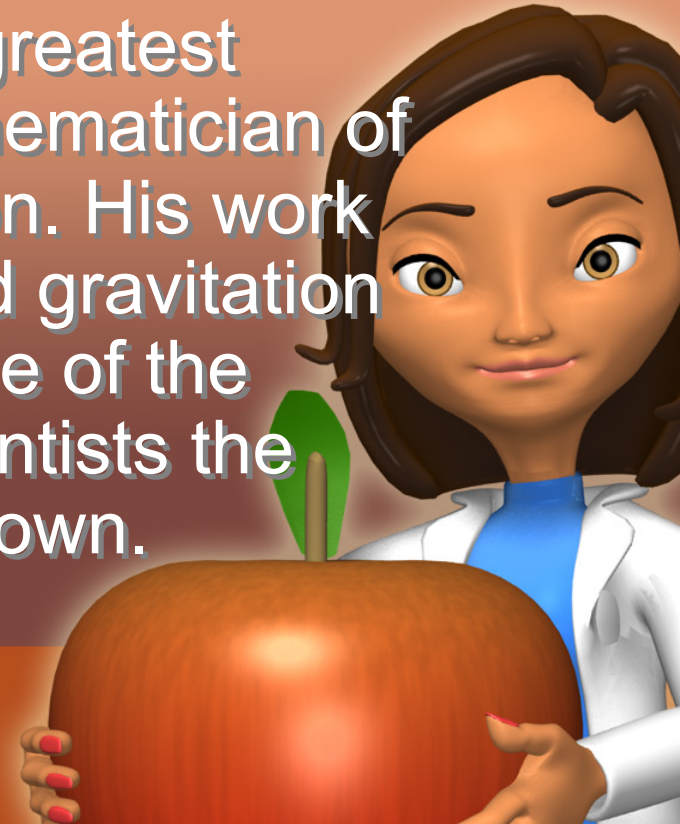
Yes, it's this one



Who discovered it?



- It was **Sir Isaac Newton** that 'worked-out' gravity.
- 1643 – 1727
- He was the greatest English mathematician of his generation. His work on optics and gravitation make him one of the greatest scientists the world has known.



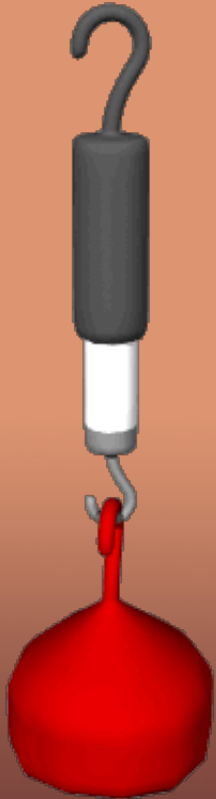
Who discovered it?



The story goes that he was sitting under an apple tree and an apple fell onto his head. He went to to explore why it fell down and came up with a theory and mathematical equation.. He named it GRAVITY.



How do we measure it?



- We measure all forces in **Newton**s. The effect of gravity gives us our weight - so our weight should *always* be in Newtons.
- It is mass which is measured in kilograms.

Newtonmeter (also called Forcemeter, Spring balance, and Pullmeter)



Links for further study



Which falls faster? learningzone video clip

<http://www.bbc.co.uk/learningzone/clips/1868.bb.wmv>

Travelling to Jupiter.. Effects of gravity (learningzone video)

<http://www.bbc.co.uk/learningzone/clips/1599.nb.wmv>

Simple Flash animation by skool..: (aimed at KS3) has voiceover (also a simulation and good quiz)

http://lgfl.skool.co.uk/viewdetails_ks3.aspx?id=376

Good explanations, some images, aimed at KS2:

<http://www.icteachers.co.uk/children/sats/gravity.htm>

A child-friendly site explaining gravity, uses pictures

<http://www.zephyrus.co.uk/gravity.html>

Some background on Sir Isaac Newton

<http://www.zephyrus.co.uk/isaacnewton.html>

Quiz

1. Is gravity a push or a pull?

Pull

2. Where is the gravitational pull strongest – the Earth or moon?

The Earth

3. If we went to the moon, what measurement would change about us?

Our weight – we would be lighter

4. Who discovered gravity?

Sir Isaac Newton

